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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,014	01/08/2002	Timothy C. Homan	LA-7021-101.US/10021688	6111

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EXAMINER

DEBERADINIS, ROBERT L

ART UNIT

PAPER NUMBER

2836

DATE MAILED: 02/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/043,014

Applicant(s)

HOMAN ET AL.

Examiner

Robert DeBeradinis

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2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-9 and 11 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 08 January 2002 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The reply filed on 3//29/04 by fax consists of amendments to claim 1, cancellation of claim 10 and addition of new claim 11. The claims are not allowable as explained below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over CHIU 6,326,882 in view of JAPANESE DOCUMENT 56,030,673A in further view of CHANG 5,175,453.

Regarding claim 1.

CHIU discloses load activation and a grace period timing system comprising:

A monitor (controller 73 light switch) for detecting when a lamp switch is activated and providing an output signal at a first level representative thereof;

A timer receiving said output signal for providing a predetermined amount of time to run the fan after the light switch is turned off and provides periodical cycling of the load (fan) when light is off (abstract).

A power switch for applying electrical power to said load when said monitor output signal is at said first level and continuing until said timer reaches said predetermined time.

CHIU does not disclose a timer comprising a pulse generator and a counter, said counter receiving the output of said pulse generator, said timer receiving said output signal of said monitor to activate said pulse generator but to disable said counter so long as said first level output signal is applied, said counter being enabled when said lamp switch is deactivated and said monitor output signal level changes to a second level so that said counter counts said pulse generator output for a predetermined preset but variable time.

JAPANESE DOCUMENT 56,030,673A, discloses a pulse counting timing circuit comprising: a pulse generator and counter wherein said counter being enabled through a counter inhibit input terminal.

JAPANESE DOCUMENT does not disclose a programmable counter.

CHANG discloses a configurable pulse generator especially for implementing signal delays wherein a fixed frequency oscillator drives a counter to determine, by reaching a pre-determined, usually manually-selected count, a time interval for an output pulse (column 2, lines 61-67).

It would have been obvious to one having ordinary skill in the art at the time of this invention to have modify the ventilation device, disclosed by CHIU, by replacing the timer with a timer comprising a pulse generator and a counter and enabling the counter with the counter inhibit signal input. The motivation would be to provide a programmable

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fan function to set the fan time grace period depending on the size or volume of the enclosed room.

Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over CHIU 6,326,882 in view of JAPANESE DOCUMENT 56,030,673A in further view of CHANG 5,175,453 in further view of YOKOMORI 4,280,063.

Regarding claim 2.

CHIU 6,326,882 in view of JAPANESE DOCUMENT 56,030,673A in further view of CHANG disclose the system as defined in claim 1.

CHIU 6,326,882 in view of JAPANESE DOCUMENT 56,030,673A in further view of CHANG do not disclose wherein said pulse generator is an analog oscillator including means for varying the frequency, said frequency changes determining the variable grace period.

YOKOMORI discloses an electronic timer device comprises a frequency variable oscillating circuit (col. 1, lines 28-29).

It would have been obvious to one having ordinary skill in the art at the time of this invention to modify the timing circuit in the ventilation device disclosed in the above references to include frequency variable oscillating circuit. The motivation would be to provide vernier adjustment to select timing ranges for the grace period delay.

Regarding claims 3, 4, 5, 6.

CHIU 6,326,882 in view of JAPANESE DOCUMENT 56,030,673A in further view of CHANG 5,175,453 in further view of YOKOMORI 4,280,063 disclose the system as defined in claim 2.

The above references do not disclose said power switch comprises a field effect transistor.

The Examiner takes official notice, with support from page 116 of the entitled Text, "THE ART OF ELECTRONICS" second edition by author PAUL HOROWITZ and WINFIELD HILL. The field effect transistor is a commonly used device for switching loads in or out of a circuit.

It would have been obvious to replace the relay 32 with a solid state switch i.e. field effect transistor (FET) and to provide the correct driver to drive the FET device to power the load. The motivation would be to replace the mechanical relay with a solid state device to gain the well known advantage of the added reliability that solid state devices have over mechanical relays.

Claims 7, 8, 9, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over CHIU 6,326,882 in view of JAPANESE DOCUMENT 56,030,673A in further view of CHANG 5,175,453 in further view of YOKOMORI 4,280,063 and SEENER 6,125,642. Regarding claims 7, 8, 9, 11.

CHIU 6,326,882 in view of JAPANESE DOCUMENT 56,030,673A in further view of CHANG 5,175,453 in further view of YOKOMORI 4,280,063 disclose the system as defined in claim 2.

The above references do not disclose the power switch comprises a Triac.

SEENER discloses a switch control system for controlling a triac device for switching AC to the load, including an optocoupler (D4) to conduct and generate a firing sequence to switch the triac.

It would have been obvious to one having ordinary skill in the art at the time of this invention to modify the drive circuit disclosed by the above references to have a tiac switch to switch the load (fan). The motivation would be to switch an AC source to drive an AC load.

Response to Arguments

Applicant's arguments, see arguments, filed 3/29/04, with respect to the rejection(s) of claim(s) 1-9 under CHIU and the prior art used for the first rejection have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of CHIU with new supporting prior art.

Any inquiry concerning this communication should be directed to Robert L. DeBeradinis whose number is (571) 272-2049. The Examiner can normally be reached Monday-Friday from 8:30 am to 5:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Brian Sircus, can be reached on (571) 272-2058. The Fax phone number for this Group is (703) 872-9306.

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RLD

JANUARY 28, 2005

A handwritten signature in black ink, appearing to read 'Robert L. Deberadinis', written in a cursive style.

ROBERT L. DEBERADINIS
PRIMARY EXAMINER